

# Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: **Bio Lab Chlorine**

From: **9/30/24**  
**5:00 PM**

To: **10/1/24**  
**4:59 AM**



Station 1 - Intersection of VFW Dr and Dogwood Dr - 33.6676025, -84.0353546							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	1738	11	0-16 ppb	0.06 ppb	9000 ppb 8hr avg
	CO	No	1738	2	0-4 ppm	0.00 ppm	83 ppm 1hr avg
	H2S	No	1738	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	O2	No	1738	1738	20.90-20.90 %	20.90 %	<19.5 or >23%
	LEL	No	1738	0	0-0 %	0 %	0.1
	CL2	Yes (see review section)	1738	1430	0-31.20 ppm	1.61 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	Yes	13746	4181	0-15.50 ppm	0.31 ppm	1.8 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	12879	1741	0-14 ppb	0.64 ppb	300 ppb 1hr avg

Station 2 - Mammy's - 33.674175, -84.029980							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	1682	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	CO	No	1682	14	0-26 ppm	0.07 ppm	83 ppm 1hr avg
	H2S	No	1682	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	O2	No	1682	1682	20.90-20.90 %	20.90 %	<19.5 or >23%
	LEL	No	1682	0	0-0 %	0 %	0.1
	CL2	No	1682	108	0-0.50 ppm	0.01 ppm	0.5 ppm 1hr avg
SPM Flex	HYDROGEN CHLORIDE (HCL)	No	13758	2077	0-0.27 ppm	0.01 ppm	1.8 ppm 1hr avg
SPM Flex	PHOSGENE (COCL2)	No	13772	517	0-4 ppb	0.09 ppb	300 ppb 1hr avg

Station 3 - ER Trailer - 33.674217, -84.046940							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	1950	294	0-4130 ppb	10.41 ppb	9000 ppb 8hr avg
	CO	No	1950	95	0-17 ppm	0.22 ppm	83 ppm 1hr avg
	H2S	No	1950	41	0-1.70 ppm	0.01 ppm	0.51 ppm 1hr avg
	O2	No	1950	1950	20.90-20.90 %	20.90 %	<19.5 or >23%
	LEL	No	1950	0	0-0 %	0 %	0.1
	CL2	No	1950	76	0-0.30 ppm	0.01 ppm	0.5 ppm 1hr avg

Station 4- Lake- Rockbridge Rd- 33.677760, -84.029640							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	1557	3	0-351 ppb	0.47 ppb	9000 ppb 8hr avg
	CO	No	1561	0	0-0 ppm	0 ppm	83 ppm 1hr avg
	H2S	No	1561	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	O2	No	1561	1561	20.60-20.70 %	20.60 %	<19.5 or >23%
	LEL	No	1561	0	0-0 %	0 %	0.1
	CL2	Yes (see review section)	1561	1402	0-2.40 ppm	0.29 ppm	0.5 ppm 1hr avg

Station 5-Park Circle- Lester Rd- 33.674816, -84.037610							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	1905	235	0-15 ppb	0.73 ppb	9000 ppb
	CO	No	1905	7	0-12 ppm	0.02 ppm	83 ppm
	H2S	No	1905	0	0-0 ppm	0 ppm	0.51 ppm
	O2	No	1905	1905	20.90-20.90 %	20.90 %	<19.5 or >23%
	LEL	No	1905	0	0-0 %	0 %	0.1

Station 6- Bio Lab Gate- 33.6740723, -84.0453600							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	1950	1	0-5 ppb	0.00 ppb	9000 ppb 8hr avg
	CO	No	1950	0	0-0 ppm	0 ppm	83 ppm 1hr avg
	H2S	No	1950	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	O2	No	1950	1950	21.10-21.40 %	21.20 %	<19.5 or >23%
	LEL	No	1950	0	0-0 %	0 %	0.1

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

**Project Name: Bio Lab Chlorine**

**From:** 9/30/24  
5:00 PM

**To: 10/1/24  
4:59 AM**



Station 7- North Main St at Irwin Bridge Rd- 33.674046, -84.025100							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
AreaRAE Pro	VOC	No	467	0	0-0 ppb	0 ppb	9000 ppb 8hr avg
	CO	No	467	0	0-0 ppm	0 ppm	83 ppm 1hr avg
	H2S	No	467	0	0-0 ppm	0 ppm	0.51 ppm 1hr avg
	O2	No	467	467	20.90-20.90 %	20.90 %	<19.5 or >23%
	LEL	No	467	0	0-0 %	0 %	0.1

Station 8- MultiRae Pro Roaming							
Instrument	Analyte	Action Level Exceedance?	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level
MultiRAE Pro	VOC	No	841	39	0-1.10 ppb	0.01 ppb	9000 ppb 8hr avg
	O2	No	841	841	15.70-20.90 %	20.86 %	<19.5 or >23%
	LEL	No	841	0	0-0 %	0 %	0.1
	CL2	No	841	35	0-3.10 ppm	0.01 ppm	0.5 ppm 1hr avg

Notes:

	Analyte	Definition	Action Level Reference
% Percent	CL2	Chlorine	AEGL-1 1hr
< Less than	CO	Carbon Monoxide	AEGL-2 1hr
> Greater than	H2S	Hydrogen Sulfide	AEGL-1 1hr
AEGL Acute Exposure Guideline Levels for Airborne Chemicals	HYDROGEN CHLORIDE (HCL)	Hydrogen Chloride	AEGL-1 1hr
C/m Counts (ionization events) per minute	LEL	Lower Explosive Limit	29 CFR 1910.146, Confined Spaces
µg/m³ Micrograms per cubic meter	O2	Oxygen	29 CFR 1910.146, Confined Spaces
min Minute	PHOSGENE (COCL2)	Phosgene (COCl₂)	AEGL-2 1hr
PAC Protective Action Criteria	VOC	Volatile Organic Compounds	AEGL-1 1hr
PEL Permissible exposure limit			
ppb Parts per billion			
ppm Parts per million			
PM Particulate matter			
SOG Standard Operating Guidelines			
SPM Single Point Monitor			
TEEL Temporary Emergency Exposure Limit			
TLV Threshold limit value			

# Air Monitoring Summary Tables – Review

**Project Name:** Bio Lab Chlorine

The EPA uses air monitoring instruments with real-time alerts to track air quality during an emergency response. This air monitoring summary table report is used by EPA and local responders to review the thousands of measurements that can be collected in a single day.

The following is a review of station results for the time period from 5:00pm on 9/30/2024 to 4:59am on 10/1/2024:

- **Station 1:** From 12:30am to 2:30am there was a rise and fall of Cl<sub>2</sub> concentrations that peaked to 27.7ppm at 1:00am, then fell below 1ppm at 1:15am, then peaked again up to 31.2ppm at 1:45am. The Cl<sub>2</sub> hourly averages from 12:00am to 3:00am were 4.3ppm, 10.7ppm, and 0.5ppm, respectively. There was a rise and fall of HCl measured from 12:30am to 2:15am with a peak of 15.5ppm at 12:45am. The hourly average for HCl from 1:00am to 2:00am was 2.15ppm; the hourly average for the remainder of the period did not exceed 0.96ppm. There multiple detections of phosgene from 12:30am to 2:30am with a peak of 14ppb; the hourly average for phosgene did not exceed 5ppb (the action level for phosgene is 300ppb).
- **Station 2:** From 10:20pm to 12:00am there was a rise and fall of Cl<sub>2</sub> concentrations that peaked at 0.5ppm. All other measurements were 0ppm. The Cl<sub>2</sub> hourly average for the period did not exceed 0.09ppm. From 11:00pm to 12:30am there was a rise and fall of HCl with a peak of 0.27ppm; the hourly average for HCl did not exceed 0.1ppm. There were some measurements of phosgene at or below 4ppb but none were sustained measurements.
- **Station 3:** There were multiple brief but not sustained measurements of Cl<sub>2</sub> from 10:30pm to 5:00am; the Cl<sub>2</sub> hourly average for the period did not exceed 0.02ppm. There were multiple brief but not sustained measurements of H<sub>2</sub>S throughout the period with no measurements above 0ppm from 7pm to 10:30pm; the H<sub>2</sub>S hourly average for the period did not exceed 0.06ppm.
- **Station 4:** A sustained Cl<sub>2</sub> concentration of 0.1ppm was measured beginning at 9:00pm. A rise and fall of Cl<sub>2</sub> was measured from 10pm to 11pm with a peak of 2.4ppm; the average for this hour was 1.05ppm. The hourly average for the remainder of the period did not exceed 0.21ppm.
- **Station 5:** No issues observed. This instrument lacks a Cl<sub>2</sub> sensor
- **Station 6:** No issues observed. This instrument lacks a Cl<sub>2</sub> sensor
- **Station 7:** No issues observed. This instrument lacks a Cl<sub>2</sub> sensor
- **Station 8:** This instrument is not stationary. The MultiRAE is a handheld instrument that was used to measure chlorine readings close to the Site for personnel health and safety and to investigate low-lying areas. The period average for this instrument is not interpreted as an actual exposure.

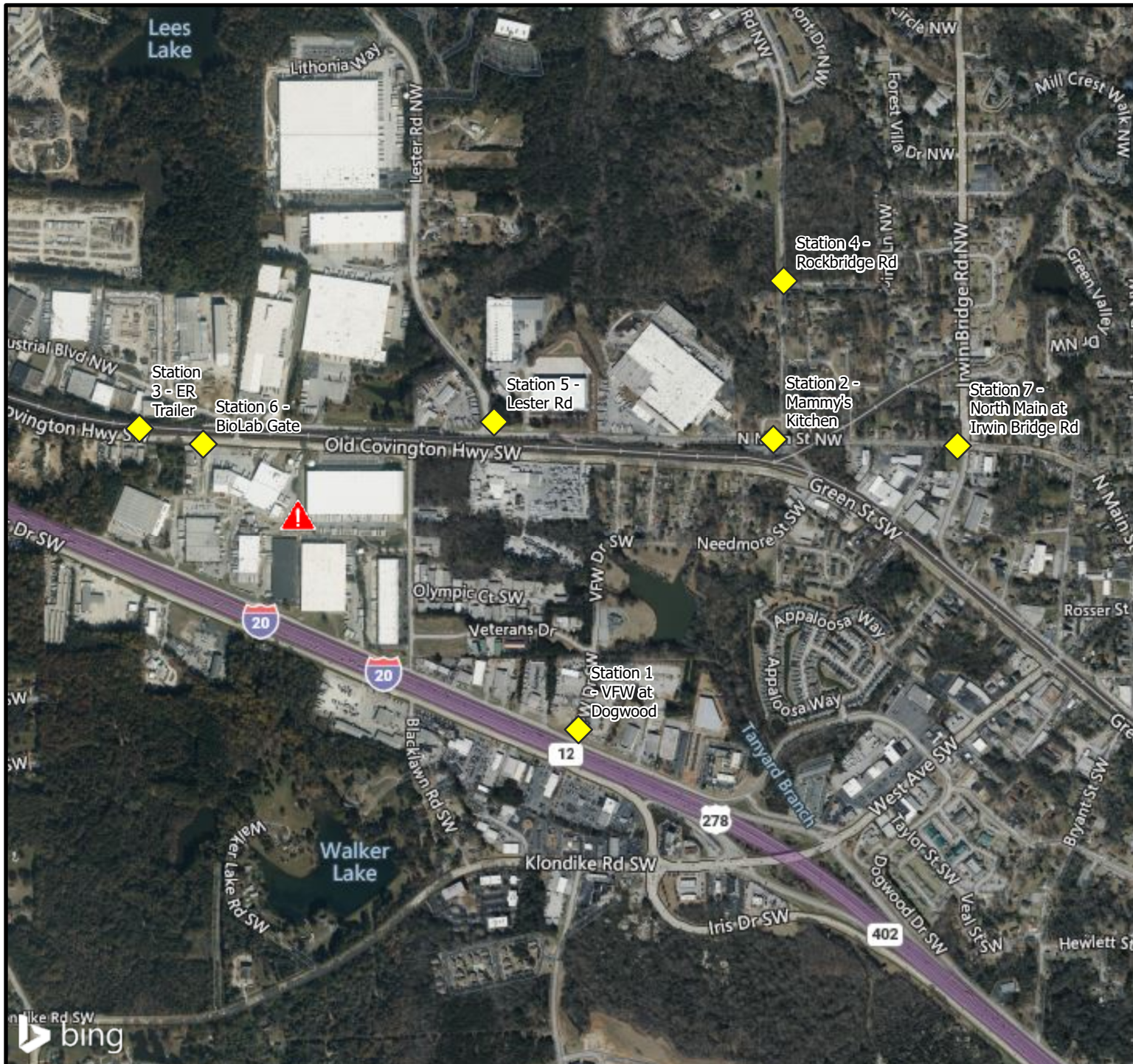
# Air Monitoring Summary Tables – Explanation of Tables

**Project Name:** Bio Lab Chlorine

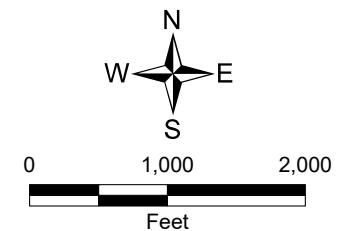
The following information is provided in each report:

- **Station** – at the top of each table is a name and location for each air monitoring station. These are mobile stations that may change over time.
- **Instrument** – this is the model of instrument being used to measure the air. Some stations may use multiple instruments, and some instruments may measure multiple things at once
- **Analyte** – these are the chemicals or other compounds that the instrument is measuring:
  - **VOC:** Volatile Organic Compounds; this is not a specific chemical but includes a long list of possible chemicals, many of which have strong odors
  - **CO:** Carbon Monoxide; this compound is commonly associated with combustion (i.e. fires)
  - **H2S:** Hydrogen Sulfide; this is a default sensor for the instrument and is used for industrial safety
  - **LEL:** Lower-Explosive Limit; this is a default sensor for the instrument and is used for industrial safety
  - **O2:** Oxygen; this is a default sensor for the instrument and is used for industrial safety
  - **Cl2:** Chlorine; chlorine gas is an inhalation hazard with a pungent suffocating odor and is a contaminant of concern for the site
  - **HCl:** Hydrogen Chloride; a corrosive gas with a sharp, pungent odor and is a contaminant of concern for the site
  - **COCl2:** Phosgene; a potential combustion product that EPA monitors for at chemical and industrial fires
- **Action Level Exceedance** – is an easy-to-read determination whether one of the Action Levels in the column on the right *may have* been exceeded. The action levels are based on *averages over time* but this column may say “Yes” whenever a single measurement exceeds that number. This helps responders assess whether further protective measures are needed.
- **Number of Readings** – the number of measurements collected by the sensor, usually collected once every second or every minute.
- **Number of Detections** – the number of measurements greater than zero
- **Concentration Range** – the minimum and maximum measurement that was collected
- **Period Average** – the average measurement for the entire collection period
- **Action Levels** – based on the most protective AEGLs (Acute Exposure Guideline Levels) which are used by emergency responders when dealing with chemical spills or other exposures and describe the human health effects from once-in-a-lifetime, or rare, exposure to airborne chemicals. Further information is available at [EPA.gov/AEGL](http://EPA.gov/AEGL).

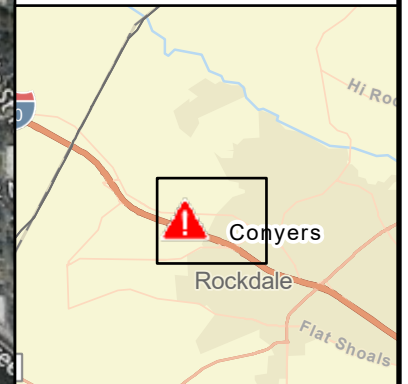




- Legend**
- VIPER Deployment Locations
  - Incident Location



Map Source:  
BING Maps Hybrid



**United States  
Environmental Protection Agency  
Region 4**

**VIPER Deployment Locations  
9/30/24 5 PM to 10/1/24 5 AM**

**Site Name: BIOLABS Fire**

**City:** Conyers  
**County:** Rockdale  
**State:** Georgia



**Date:**  
10/1/2024  
**Analyst:**  
NATHAN WARREN